**IN THE CLAIMS**

1. (canceled):

2. (currently amended): ~~The~~ A method ~~of claim 1,~~ comprising:

converting a first gamut in a CMY color space to a first gamut in a CMYK color space;

converting the first gamut in CMYK color space to a gamut in a color space having a lightness component;

rescaling a lightness component of a gamut value in the color space having a lightness component to form a modified gamut; and

converting the modified gamut to a second gamut in a CMYK color space;

wherein said rescaling a lightness component of a gamut value in the color space having a lightness component to form a modified gamut comprises:

modifying the gamut in the color space having a lightness component by changing a lightness component of a color value in the color space having a lightness component such that an upper surface of the first gamut in the CMY color space is preserved and a lower surface of the first gamut in the CMY color space is mapped to a bottom surface of the gamut of a full CMYK color space to form an expanded gamut in the color space having a lightness component.

3. (previously presented): The method of claim 2, wherein said converting a first gamut in a CMY color space to a first gamut in a CMYK color space comprises:

applying a black generation method to the gamut in the first CMY color space to form the first gamut in the CMYK color space.

4. (previously presented): A method comprising:

converting a first gamut in a CMY color space having an upper surface and a lower surface to a first gamut in a CMYK color space;

converting the first gamut in the CMYK color space to a gamut in a CIELAB color space, the gamut in the CIELAB color space having a lightness component;

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modifying the gamut in the CIELAB color space by changing the lightness component such that the upper surface of the first gamut in the CMY color space is preserved and the lower surface of the first gamut in the CMY color space is mapped to the bottom surface of the gamut of a full CMYK color space to form a gamut in an expanded CIELAB color space; and

transforming the gamut in the expanded CIELAB color space to form a second gamut in the CMYK color space.


5. (previously presented): The method of claim 4, wherein converting a gamut in a CMY color space having an upper surface and a lower surface to a gamut in a CMYK color space having a bottom surface comprises:

applying a black generation method to the gamut in the CMY color space to form the first gamut in the CMYK color space.


6. (previously presented): The method of claim 5, wherein applying a black generation method to the gamut in the CMY color space to form the first gamut in the CMYK color space comprises:

applying Gray Component Replacement (GCR) to the gamut in the CMY color space to form the first gamut in the CMYK color space.


Claims 7-14 (canceled):


15. (currently amended): The method ~~of claim 14, wherein linearly rescaling the lightness component in the CIELAB space comprises:~~ comprising:

transforming a CMY space gamut to a first CMYK space gamut by including a black colorant in the CMY space gamut to form the CMYK space gamut;

transforming the first CMYK space gamut into a CIELAB space gamut by computing the CIELAB space gamut from a model capable of mapping the CMYK space gamut into the CIELAB space gamut;

changing a lightness component of the CIELAB space gamut to form an enhanced CIELAB space gamut by linearly rescaling the lightness component of the

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CIELAB space gamut by computing a rescaling factor that is a function of an $L_{min}$, an $L_{max}$, and an ~~$L_{mincmy}$~~ $L_{mincmy}$; and

transforming the enhanced CIELAB space gamut to form a second CMYK space gamut.

Claims 16 - 22 (canceled)

23. (currently amended): The method ~~of claim 14, wherein linearly rescaling the lightness component in the CIELAB space comprises:~~ comprising:

transforming a CMY space gamut to a first CMYK space gamut by including a black colorant in the CMY space gamut;

transforming the first CMYK space gamut into a CIELAB space gamut by printing a plurality of patches and measuring each of the plurality of patches to obtain the CIELAB space gamut;

changing a lightness component of the CIELAB space gamut to form an enhanced CIELAB space gamut by linearly rescaling the lightness component of the CIELAB space gamut by computing a rescaling factor that is a function of an $L_{min}$, an $L_{max}$, and an ~~$L_{mincmy}$~~ $L_{mincmy}$; and

transforming the enhanced CIELAB space gamut to form a second CMYK space gamut.

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